

Serial Nr.: 10/699,547
Art Unit: 3721

03220-URS

AMENDMENTS TO THE DRAWINGS:

FIG. 1 is amended to include a legend --Prior Art-- as marked in the attached annotated drawing sheet showing marked-up changes.

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REMARKS

In the Office Action, claims 1-2 are rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement and being indefinite, and claims 1-2 are rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art in view of Official Notice.

As described in the background of the invention, a conventional shock absorbing spindle comprises a spindle inserted through a washer and an elastomer which are capped by a sleeve. A ball is disposed in chutes formed on both the spindle and the inner surface of the sleeve by pressing the elastomer downwards to expose the chute on the spindle. The ball is thus retained in the chutes to hold the whole spindle structure together after the elastomer returns to a normal state. The drawback of the conventional spindle structure is that the ball may fall off if an impact to the spindle is strong enough to compress the elastomer and move the sleeve downwards to expose the chute on the spindle. Furthermore, the thickness of the washer has to be quite small because it must allow the sleeve to be pressed down to expose the chute of the spindle with the washer already in place for disposing the ball.

The gist of this invention is to provide a shockproof spindle with a structure in which a thicker clastic washer or a stronger elastomer is used to improve the impact absorbing efficiency and the washer is installed after the ball has been retained in the chutes of the spindle and the sleeve so that the movement of the sleeve is limited in such a way that the ball can not fall off the chutes. Accordingly, the washer of the invention

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has a C-shape with a side opening large enough to receive the spindle and is installed after the ball has been disposed. An elastomer with a stronger elastic force may be used because the sleeve is positioned lower without the washer when the chute on the spindle is exposed for installing the ball. The advantage is that the distance that the sleeve can move downwards after the washer is installed is reduced by the thickness of the washer. Therefore, the chute on the spindle can no longer be exposed even under strong impact and the ball can not fall off. In addition, a thicker elastic washer and an elastomer with a stronger elastic force can be installed to improve shock absorbing efficiency of the spindle.

In response to the office action, claims 1-2 are now cancelled. A new method claim is presented as claim 3 to clearly define the invention in a patentable way to overcome the rejections under 35 U.S.C. §112 and 35 U.S.C. §103(a). Because there is no cited prior art teaching or anticipating the instant invention, claim 3 should be allowable. Claims 4-6 are presented as dependent apparatus claims of claim 3. By virtue of dependency, they should also be allowable.

From the foregoing discussion, it is clear that the instant invention differs from the prior arts. The physical difference results in different effects and is not obvious. The specification has been amended to correct a few grammatical and editorial errors as well as clarify the vague and confusion wordings pointed out by the examiner. Furthermore, a few paragraphs are added to more clearly explain how the C-shaped washer of the invention improves the prior arts and provides the benefit to a shock-proof spindle so as


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to comply with the enablement requirement under 35 U.S.C. §112 without adding any new matter.

FIG. 1 is amended to include the legend --Prior Art-- as shown in the attached annotated sheet for approval. A replacement sheet will be submitted by post office mail to ensure adequate quality for patent publication after the application is allowed. The new claims 3-6 are pending in the application and in full condition for allowance. Prompt and favorable reconsideration of the application is respectfully solicited.

Respectfully submitted,



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101699,547
Annotated Sheet

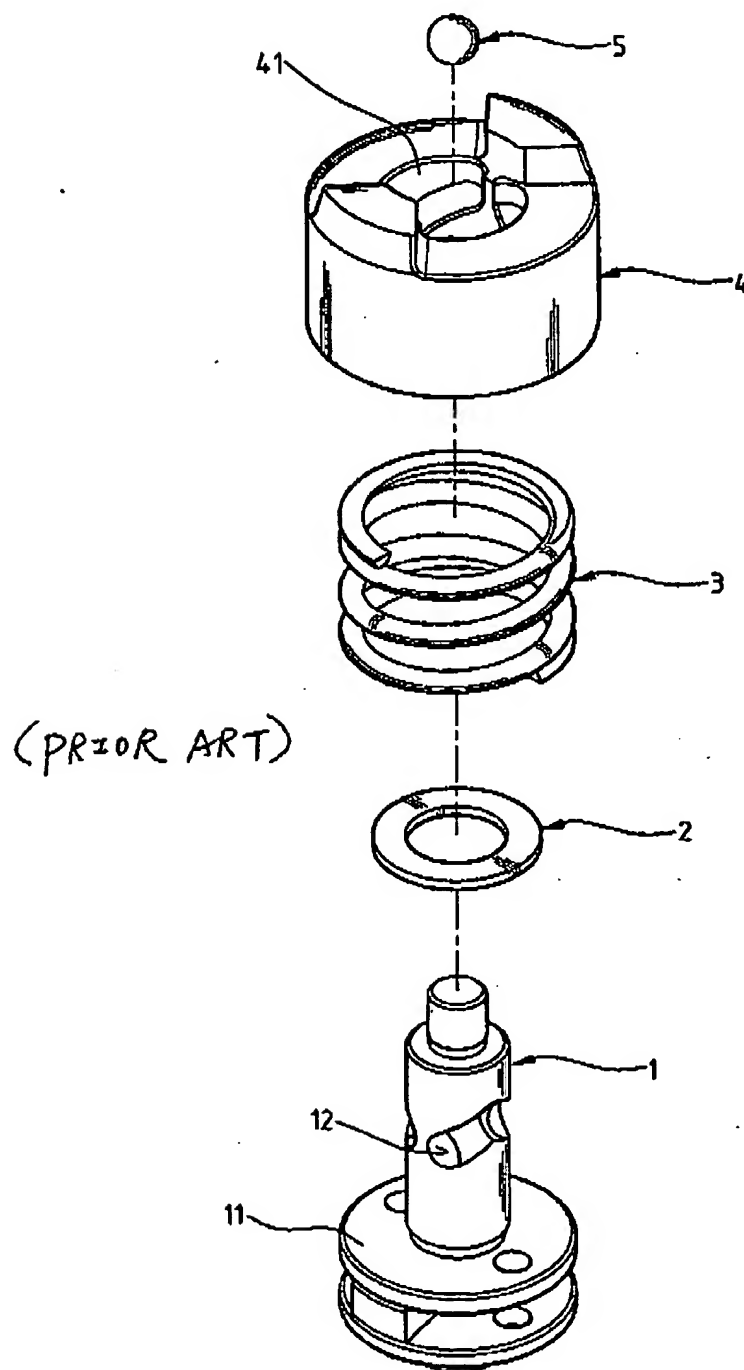


FIG. 1